

### **REMARKS**

The applicants sincerely appreciate the Examiner for pointing out the inconsistencies and mistakes of the present invention specification and claim. As the Examiner will see that with the amendments to the specification and claim, the present invention is clearly and obviously distinct from prior arts. The present amendments are in response to the Office Action mailed April 28, 2008, in which claims 1-19 are rejected. Applicants have thoroughly reviewed the outstanding Office Action including the Examiner's remarks. The following remarks and above amendments are believed to be fully responsive to the Office Action when coupled with the above amendments, hence, the applicants believe the amendments render all claims at issue patentable.

The first of such amendments to the specification paragraphs, and abstract, is a typing error. Amendments to the specification paragraphs 0010, 0013, 0014, 0017, 0018, 0023, 0028, 0030, and abstract, wherein screening procedure is amended as filtering device. Due to typing error that filtering device was mistakenly typed in, and therefore referred to as screening procedure. As noted the first mistake happened in paragraph 0010, where screening procedure was mistakenly typed in instead of filtering device. Paragraph 0010 was written as: In accordance with an aspect of the present invention, the present invention provides an in-vitro blood plasma lipids filtering method, comprising the following steps: collecting the blood and separating out the blood plasma, carrying out saline solution treatment of the apparatus, carrying out blood plasma peristalsis, temperature and pressure control, passing the blood plasma through to screening procedure (here it should be filtering device), collect post-filtered blood plasma back into the blood. In accordance and as reflected with support of the present invention figure representation that filtering device is and should be the correct usage instead of screening procedure. Hence the applicants are amending screening procedure to filtering device in the specification and abstract.

In addition, paragraph 0022 on page 4, the applicants are also amending utilizes to carry out a centrifugal separation method due to the functionality of a blood separating device. The amendment is to show that a blood separating device carries out the separation method rather than utilizes the separation method.

The original abstract of the present invention is also being replaced with a new abstract.

Claims 1, 3, 4, 6, 7, 9, and 11-19 are amended; claim 10 is cancelled; claims 2, 5, and 8 are unchanged. Applicants respectfully submit that no new matter has been added and that the originally filed specification, drawings, and claims support the amendments.

#### **Claim Rejections Under 35 U.S.C. 103 (a)**

An additional amendment to claims 10 – 19, aside from the following explanations, “The in-vitro blood plasma lipids screening procedure” is amended to “The in-vitro blood plasma lipids filtering device” due to typing mistake.

In regard to items 4 to 12, Examiner states that claims 9-16 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Bomberger et al. (US Patent Application Publication No. 2003/0150809) in view of Cham (US Patent 4,895,558), further in view of Jacobsen (US Patent 5,141,493).

Independent claim 9 has been amended to state as follows:

Regarding claim 9, the applicants are amending screening procedure as filtering device, as it was a typing mistake. Therefore, An in-vitro blood plasma lipids screening procedure is now stated as An in-vitro blood plasma lipids filtering device;

a blood collecting device, adapted to collect blood from a patient; is amended as cited in paragraph 0022 of the present invention;

a blood separating device that separates the blood plasma from the blood collected by the

blood collecting device by centrifugal separation; is amended as cited in paragraph 0022 of the present invention;

a pre-filtered blood plasma bag that has an outlet connected to the saline solution treatment bag and containing an automatic weight/volume detection device for transmitting a signal that triggers a stop response to the blood separating device and the blood collecting device when the blood plasma bag is full; as cited in paragraph 0015 of the present invention, and the applicants believe this will set the present invention to be distinct from prior arts;

a blood lipids screening procedure is amended as a blood lipids filtering device that receives and filters the blood plasma and further comprising a saline solution treatment bag and a waste saline solution bag; as it was a typing mistake in the original present invention claim, and as cited in paragraph 0014 of the present invention;

In addition, a typing mistake occurred in claim 9 where a blood plasma feedback device, which “are” is amended as a blood plasma feedback device, which “is”; and blood plasma lipids screening procedure is also amended as blood plasma lipids filtering device.

Regarding claim 9, Bomberger discloses an in-vitro blood plasma lipids screening procedure, however, it is distinguishable from the present invention as the present invention blood collecting device allows blood cellular components to be fed back in a loop, and further comprises three thin films or membranes. Furthermore, the present invention pre-filtered blood plasma bag contains an automatic weight or volume detector device for transmitting a signal thereby triggering a stop response when the blood plasma bag of the blood separating device or the blood collecting device is full. As for a saline solution treatment bag (column 8, lines 40-44 and Fig. 6, replacement fluid solution container), and a waste saline solution bag (column 8, lines 40-44 and Fig. 6, waste bag), Cham cites no reference of the replacement fluid matter, as does the present invention. Hence, the waste product being collected is from the saline solution treatment. As for a pre-filtered

blood plasma container (column 3, lines 21-34 and Fig. 1A, bubble trap 20) and a post-filtered blood plasma bag (column 3, lines 43-54 and Fig. 1A, 3-liter bag 48) cited by Jacobsen, that the circuit connections are different and the bag is distinguishable as a 3-liter bag, and the applicants believe the 3-liter bag has set forth limiting Jacobsen and not the present invention. In addition, the present invention is set forth distinguishable from Jacobsen in that the present invention pre-filtered blood plasma bag contains an automatic weight or volume detector device for transmitting a signal thereby triggering a stop response when the blood plasma bag of the blood separating device or the blood collecting device is full. Moreover, the present invention post-filtered blood plasma bag having an entrance connected via a pipeline tube to the waste saline solution bag so that post-filtered blood plasma is not mixed with the saline solution during saline solution treatment and the saline solution flows to the waste saline solution bag afterwards.

Claim 10 is cancelled since the contents of claim 10 in combined in claim 9.

Claim 12 where pressure control device reads out is also amended to pressure control device indicates, as cited in paragraph 0027, 5<sup>th</sup> sentence from the bottom of the paragraph which states: When the pressure achieves a level which could possibly harm the apparatus or make the patients feel ill, the pressure control device will indicate this pressure value, and the monitoring staff can reduce the peristaltic pump speed to reduce pressure.

Claim 15 whereas The in-vitro blood plasma lipids screening procedure is amended to The in-vitro blood plasma lipids filtering device; in addition, filtering device to maintain a constant temperature of the blood plasma is added. The afore-said addition of words stating to maintain the temperature control of the blood plasma is from paragraph 0023, and this is added to clarify the purpose of the temperature control device thereof. There is one other typing mistake that device “in” is amended to device “is”.

**Claim Rejections Under 35 U.S.C. 103 (a)**

In regard to items 13 - 15, Examiner states that claims 17 and 18 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Bomberger et al. (US Patent Application Publication No. 2003/0150809) in view of Cham (US Patent 4,895,558) in view of Jacobsen (US Patent 5,141,493), further in view of Matkovich et al. (US Patent 5,252,222).

Regarding claim 17, as cited by the Examiner, Bomberger discloses a plurality of hollow fibers having small diameters of about 0.2 mm – 1.0 mm, whereas the present invention discloses a multi-layers of thin film membranes of which a first film is a membrane having filter aperture pore of about 0.3 to 0.65 microns and comprises a lipid absorptive material, a second film is a membrane having filter aperture pore of about 0.3 microns, and a third film is a membrane having filter aperture pore of about 0.2 microns and is made of nylon as a base material. The size differences merely set the present invention apart from Bomberger, Cham, Jacobsen, and Matkovich.

Regarding claim 18, as cited by the Examiner, because claim 17 is amended, in view of claim 17 of the present invention, claim 18 states at least one first film that is interposed between the second and third film aside from the multi-layers of thin film membranes, and this I believe, sets the present invention apart from Bomberger, Cham, Jacobsen, and Matkovich. In addition, the present invention has cited in [0028] the purpose of the first film membrane is for filtering out particles that are bigger than the filter pores, the second film membrane is for filtering out bacterium and chyle-lipoprotein having diameters greater than 0.3 microns, and the third film membrane is for filtering out all other foreign particles generated from the first and second filtering process. In addition, claim 18 is amended to reflect the uniqueness of the present invention for using a multi-layers of thin film membranes other than just the first, second, and third thin film membranes as stated in [0029] of the present invention.

**Claim Rejections Under 35 U.S.C. 103 (a)**

In regard to items 16 and 17, Examiner states that claim 19 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Bomberger et al. (US Patent Application Publication No. 2003/0150809) in view of Cham (US Patent 4,895,558) in view of Jacobsen (US Patent 5,141,493) in view of Matkovich et al. (US Patent 5,252,222), further in view of Foltz et al. (US Patent 5,401,466).

Regarding claim 19, Bomberger, Cham, Jacobsen, and Matkovich do not disclose the specific material type used as stated by the present invention.

**Claim Rejections Under 35 U.S.C. 103 (a)**

An additional amendment to claims 1, 3 – 6, aside from the following explanations, screening procedure is amended to filtering device due to typing mistake.

In regard to items 18 to 23, Examiner states that claims 1-5 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Bomberger et al. (US Patent Application Publication No. 2003/0150809).

Regarding independent claim 1, claim 1 is amended as follows:

A blood plasma lipids in-vitro filtering method is amended to An in-vitro blood plasma lipids filtering method, so as to be consistent through the rest of the claim items. In addition, according to specification paragraph 0022 of the present invention, that the separated blood plasma enters a pre-filtered blood plasma bag thereafter, and this sets forth the difference from Bomberger since Bomberger makes no mention of such technique. Therefore, the amendment to claim 1 is now citing separating blood plasma from collected blood, wherein the separated blood plasma enters a pre-filtered blood plasma bag. Furthermore, with the Examiner allowing the amendment

of the applicants' typing mistake of screening procedure to filtering device, passing the blood plasma to screening procedure for filtering is now citing passing the blood plasma to filtering device for filtering. Amending claim 1 as explanations described above should and will set forth consistency with the claims and specification of the present invention.

Claims 3 and 4 where citing screening procedure will be amended to filtering device.

Regarding claims 4 and 5, with the amendments to claim 1, claims 4 and 5 are set forth distinguishable from prior art of Bomberger.

#### **Claim Rejections Under 35 U.S.C. 103 (a)**

In regard to items 24 to 26, Examiner states that claims 6 and 7 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Bomberger et al. (US Patent Application Publication No. 2003/0150809) in view of Matkovich et al. (US Patent 5,252,222).

The amendments to claim 6 where screening procedure is amended to filtering device, and an addition from paragraph 0028 of multi-layers of thin film membranes of which at least a first film is a membrane.

Regarding claim 6, as cited by the Examiner, Bomberger discloses a plurality of hollow fibers having small diameters of about 0.2 mm – 1.0 mm, whereas the present invention discloses a multi-layers of thin film membranes of which a first film is a membrane having filter aperture pore of about 0.3 to 0.65 microns and comprises a lipid absorptive material, a second film is a membrane having filter aperture pore of about 0.3 microns, and a third film is a membrane having filter aperture pore of about 0.2 microns and is made of nylon as a base material. The size differences merely set the present invention apart from Bomberger, and Matkovich.

Regarding claim 7, claim 7 is amended to reflect a number of membrane layers there placed between in addition to the first, second, and third membranes, according to paragraph 0028 of the

present invention specification. As cited by the Examiner, because claims 6 and 7 are amended to state at least one first film of a multi-layers of thin film membranes is interposed between the second and third films in addition to a number of membrane layers being placed therebetween, as cited in paragraph 0028 of the present invention, the present invention further states the purpose of the first film membrane such that the first film membrane is for filtering out particles that are bigger than the filter pores, the second film membrane is for filtering out bacterium and chyle-lipoprotein having diameters greater than 0.3 microns, and the third film membrane is for filtering out all other foreign particles generated from the first and second filtering process. In addition, claim 7 is amended to reflect the uniqueness of the present invention for using a multi-layers of thin film membranes other than just the first, second, and third thin film membranes as stated in paragraph 0029 of the present invention. The reasons stated above strongly support that the present invention is distinct and unique from prior arts, hence sets it apart from arts of Bomberger and Matkovich.

**Claim Rejections Under 35 U.S.C. 103 (a)**

In regard to items 27 and 28, Examiner states that claim 8 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Bomberger et al. (US Patent Application Publication No. 2003/0150809) in view of Matkovich et al. (US Patent 5,252,222), further in view of Foltz et al. (US Patent 5,401,466).

Regarding claim 8, Bomberger and Matkovich do not disclose the specific material type used whereas stated by the present invention.

Finally, claims 2-8, and 10-19 depend on independent claims 1 and 9, respectively. Accordingly, the applicants respectfully submits that independent claims 1 and 9 are allowable



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over the art of record and respectfully request rejection under **35 U.S.C. 103 (a)** of claims 1-19 to be reconsidered and withdrawn.

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## CONCLUSION

In light of the above amendments and remarks, Applicants respectfully submit that all pending claims as currently presented are in condition of allowance and hereby respectfully request reconsideration.

Respectfully submitted,



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